



BMJ Open Community engagement with immigrant communities involving health and wellness research: a systematic review protocol towards developing a taxonomy of community engagement definitions, frameworks, and methods

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ABSTRACT

Introduction The importance of community engagement has been established globally in health and wellness research. A certain degree of ambiguity remains, however, regarding the meaning of community engagement, which term has been used for various purposes and implemented in various forms. In this study, we aimed to explore the different definitions of community engagement, discuss the various objectives that have been proposed and uncover the diverse ways this concept has been implemented among researchers working for the betterment of the health and wellness of immigrant communities in host countries.

Methods and analysis Taxonomy is a process for classifying complex and multifaceted matters using logical conceptual domains and dimensions for clearer way of contextualising. We will develop a taxonomy to organise the available literature on community engagement in immigrant health and wellness research in a way that captures user knowledge and understanding of its various meanings and processes. Specific methodological and analytical frameworks for systematic review and taxonomy development will guide each step. We will conduct a comprehensive systematic search in relevant databases, from inception to December 2019, using appropriate keywords followed by snowball search (single-citation tracking, reference lists). Papers will be included if they fall within predefined inclusion criteria (seen as most likely informative on elements pertaining to community engagement) and are written in English, regardless of design (conceptual, qualitative and quantitative). Two reviewers will independently employ two-stage screening (title–abstract screening followed by screening of the full text to determine inclusion). Finally, information that helps to develop taxonomy of the concept and practice of community engagement will be abstracted and used towards taxonomy development, where different levels of stakeholder research team members will be involved.

Strengths and limitations of this study

- This systematic review will inform taxonomy development by summarising the literature on community engagement in immigrant health and wellness research in immigrant communities.
- To ensure the rigour of the taxonomy, comprehensive qualitative research steps will be employed during the synthesis aspect of the study.
- Notwithstanding the strengths, we need to keep in mind that, given the complexity and breadth of definitions for community engagement and its framework, we need to give careful consideration to ensure the best evidence is identified to answer the research question.

Ethics and dissemination Ethical approval is not required for this systematic review. We have opted for an integrated knowledge translation or a community-engaged knowledge mobilisation approach where we are engaged with community-based citizen researchers from the inception of our programme. We plan to disseminate the results of our review through meetings with key stakeholders, followed by journal publications and presentations at applicable platforms.

INTRODUCTION

Immigrants and refugees are a growing proportion of the population of major high-income countries such as Canada, the USA, Australia and those of Western Europe. As a consequence of this accelerated globalisation process, these countries are characterised by the increasing multiculturalism immigrants bring.¹ These newcomer populations exhibit

differences in their culture and life practices that strongly influence how, when and why individuals seek health and wellness services,² which may contribute to their vulnerability in accessing optimal care, thus further contributing to the existing health inequity between the newcomer and host populations.^{3,4}

Community engagement, which has a wide range of meanings depending on the spectrum in which it is used,⁵ is being given importance increasingly in all aspects and domains of health and wellness research, particularly to ensure translation of research findings into action and practice.^{6,7} It creates a platform for the community for valuing ongoing research to address pressing issues for the respective population while emphasising the empowerment and capacity building of community members. In a broad sense, community engagement can be defined as a process of working collaboratively with a group of people with common values, concerns and aspirations, as well as incorporating those common interests into decision-making processes.^{7,8} While interacting with a minority or vulnerable population in society, community engagement can play an important role by ensuring that grassroots community concerns are taken into account and informed decisions are made, taking into account the vulnerabilities of these communities.^{9,10}

Though the importance of community engagement has been established globally in health and wellness research,^{11,12} a certain degree of ambiguity remains regarding the practice of community engagement; this term has been used for varied purposes and implemented in various forms, ranging from single consultative meetings and focus groups with community members for data collection, to maintaining substantive, ongoing relationships with community champions in creating advisory bodies. While community engagement is a prioritised activity in the public healthcare agenda, there is inconsistency in the terminologies used to describe it, the meanings ascribed to it, the process measures used to achieve it and the rationale underpinning the stated 'need' for it.¹³

In this study, we aimed to explore the different definitions of community engagement, examine various objectives that have been proposed and uncover diverse ways this concept has been implemented by different researcher/s working for the betterment of health and wellness of immigrant communities. We will develop a taxonomy to organise the available publications on community engagement in immigrant health and wellness in a way that captures user knowledge and understanding of its various meanings and processes. A taxonomy is a system for classifying multifaceted, complex phenomena according to common conceptual domains and dimensions.¹⁴ Through this study, we aimed to provide a starting point for researchers to select the best method for their purpose by discussing the key components of the domains revealed through the taxonomy development as they pertain to community engagement in immigrant health and wellness.

OBJECTIVES

The objectives of this protocol are to develop three taxonomy schematics on community engagement with immigrant communities. The first will be created to capture the various definitions or meanings of community engagement assigned by different researchers. The second will be created to summarise the different models or frameworks researchers have used or proposed for community engagement. The third will be created to examine the various processes of community engagement applied by researchers. We propose to achieve our objectives by undertaking a comprehensive systematic review summarising existing work in this domain and a qualitative synthesis of collected information towards developing a taxonomy.

METHODS

We propose two steps to achieve our objective, which is described in the following sections. A detailed logic map of the process is presented in [table 1](#).

Systematic review

We will employ the core steps of conducting a systematic review to capture the available literature on community engagement in immigrant health and wellness. This review's protocol follows the Preferred Reporting Items for Systematic Reviews and Meta-analysis Protocols guideline, which is provided as online appendix (online supplementary table 1).

Inclusion and exclusion criteria

In this systematic review, we will include peer-reviewed journal articles, dissertations/theses and grey literature. We will search for those studies that include a theoretical discussion on community engagement of immigrants, as well as studies with an element of community engagement within their research activities. While we define immigrant as a person who has settled permanently in another country, we will also include temporary foreign workers, documented and undocumented residents, refugee claimants, refugees and asylum seekers. We will not limit our search to any particular study design, country of origin or publication date. We will only include studies written in English. Studies documenting community engagement goals, theories, definitions, models/frameworks, activities and rationale will be included in our review. We will also include studies evaluating formative or summative outcomes of community engagement as a whole, as well as any particular subactivities, application of theories or models of community engagement. A summary of the inclusion and exclusion criteria is provided in [table 2](#).

Comprehensive systematic search

Forming a predefined search strategy, we will systematically search¹⁵ indexed and non-indexed databases, repositories and online portals ([box 1](#)). The search will include papers published since database inception to December

Table 1 Logic map for the proposed systematic review towards developing taxonomy

Steps	Aim	Inputs	Activities	Key circles	Outputs	Outcomes
Comprehensive systematic search and screening for study selection	<ul style="list-style-type: none"> ▲ Summarise the existing literature. ▲ Determine the research landscape. 	<ul style="list-style-type: none"> ▲ Academic literature review. ▲ Grey literature review. 	<ul style="list-style-type: none"> ▲ Preliminary information search. ▲ Brainstorming session to develop search terms and databases. ▲ Refine search strategy. 	<ul style="list-style-type: none"> ▲ Research team. ▲ Librarian. ▲ Citizen researcher from the community. 	Summary of the existing literature	<ul style="list-style-type: none"> ▲ Obtain a clear sense of available research. ▲ Increased knowledge on the topic.
Data abstraction and analysis towards taxonomy development	<ul style="list-style-type: none"> ▲ Identify the existing community engagement initiatives. ▲ Inventory the different definitions or concepts used. ▲ Inventory the mode of operations and logistical requirements. ▲ List different methodological frameworks used. 	<ul style="list-style-type: none"> Qualitative synthesis 	<ul style="list-style-type: none"> ▲ Data abstraction. ▲ Qualitative synthesis through coding, theme development and concept mapping. 	<ul style="list-style-type: none"> ▲ Research team. ▲ Librarian. ▲ Citizen researcher from the community. 	Taxonomy	<ul style="list-style-type: none"> ▲ Obtain a clear glossary of definitions used by researchers of community engagement. ▲ Obtain a clear inventory of processes used by researchers for community engagement. ▲ Obtain a clear glossary of frameworks or theories used by researchers for community engagement.

2019. An experienced librarian (MV), our research team member, will oversee developing the search strategy and conducting the search, which will include a predefined list of keywords and medical subject heading (MeSH) terms (box 1). This method adheres to the Cochrane Collaboration approach towards systematic searching, whereby the controlled vocabulary (MeSH terms) is combined with keyword searching as presented in the title/abstract.¹⁶ To ensure a comprehensive scope of coverage, reference lists of the retrieved publications will be manually searched for additional relevant publications that may have been missed in the computerised database searches. In addition, single-citation searches and/or using a pearl growing approach for all final selected publications will be further undertaken in PubMed and Google Scholar. For the grey literature, our search strategy¹⁷ will include electronic institutional repositories, Canadian national and provincial organisations, international professional and government websites, Google and Google Scholar (see table 3 for a complete database search list). Unpublished dissertations and theses will be sought using the ProQuest Dissertations and Theses database. Information about in-progress research projects will be gathered from Health Services Research Projects in Progress. This search strategy was initially developed in October of 2019 and improved during the revision of this paper. We plan to complete the search process, outlined in figure 1, as soon as the present paper is accepted for publication (estimated to be 29 February 2020).

Study selection process

Search results will be imported into EndNote (Endnote X8, Web of Science Group), which will be used to manage the records, remove duplicates and retrieve full texts. In the first step, we will remove any duplicates. Following the inclusion and exclusion criteria relative to our research question (box 1), we will conduct two-stage screening. For the initial stage of screening, two researchers will review the title and abstract for each article and decide whether it should be included or excluded. In the second stage, full texts meeting eligibility criteria will be obtained and read, reviewed and examined for relevance. During the second screening (full-text screening), two reviewers will go through the full-text articles independently, and disagreements will be resolved by consensus and consultation with a third author.

Quality assessment

We will assess study quality to evaluate the credibility and transferability of the information synthesised. As we are not restricting our selection by study design, we will have methodologically diverse types of quantitative studies. We will assess quantitative studies using the guidelines of the Cochrane Collaboration for health promotion and public health interventions.¹⁸ Parameters of quality assessment will include correctness of study design, allocation methods, selective nature of reporting, validity of outcome ascertainment, attrition,

Table 2 Guiding questions and inclusion criteria for conducting the systematic review

Guiding questions	<ol style="list-style-type: none"> 1. What is the concept of community engagement as it appeared in the research? 2. What is the range of models and approaches underpinning community engagement? 3. What are the mechanisms and contexts through which communities are engaged? 	
Inclusion criteria	Studies	Research on community engagement or that have a component within their research activities as community engagement
	Population	Research studies conducted on newcomer populations
	Activities/descriptors	Documented community engagement goals, theories, definitions, models/frameworks, activities and rationale
	Outcome	Studies evaluating formative or summative outcomes of community engagement as a whole or any particular subactivities, such as application of theories or model of community engagement
Exclusion criteria	Studies not in English Studies focused on populations other than immigrants	

important confounding factors, thoroughness of analysis and adequacy of sample size. For qualitative studies, the Qualitative Research Quality Checklist¹⁹ will be used. This is a 25-point quality appraisal tool designed to evaluate credibility, dependability, conformability, transferability, authenticity and relevance of qualitative studies. A variety of qualitative research methods can be appraised using this tool. For mixed method studies, we will use the Mixed Methods Appraisal Tool.²⁰ We will also appraise grey literature sources for credibility of the documents and sources using the Authority, Accuracy, Coverage, Objectivity, Date and Significance Checklist.²¹ Due to the breadth of material retrieved from grey literature resources, in particular search engines such as Google, we will adhere to the recommendations of the Canadian Institute for Health Information²² and consider only the first 100 results of each search string. Google's search algorithm emphasises the relevancy of search yields, and the first 100 results displayed have been deemed most relevant. Since most

web pages or online portals in the search would not represent research studies but rather individual websites, reports, evaluations or other types of material, very few are expected to discuss methodology, limitations or data collection. Therefore, credibility evaluation will focus primarily on authority. We will use 'technical criteria',²³ which is defined, in general, as domain-dependent criteria due to its focus on the question of how the information is presented or what meta-information is provided. Two reviewers will independently assess the quality of included studies using a checklist of questions. Disagreements between the reviewers will be resolved through discussion, with the arbitration of a third reviewer where necessary.

Data extraction

Pertinent information will be abstracted from the included studies. A trained research team member will extract the information in a predetermined abstraction tool; a second trained study team member will check the abstraction for completeness and accuracy. Extracted information will include the citation, study location, study objective, study population, community engagement activity description, methods used, framework models used and main outcome variables and how they were measured (table 4). Two reviewers will independently conduct data extraction and will use Excel 2016 to build a database of results.

Taxonomy development

Introduced by the French in the early 19th century, the word taxonomy originates from the Greek word *taxis*, referring to an arrangement or order, and *nomia*, meaning distribution.²⁴ In the context of information management, the term taxonomy is used in both a specific context to refer to a hierarchical classification or categorisation system and in a broad sense to refer to any means of organising concepts of knowledge.²⁵ As an organising principle, taxonomy would provide a foundation on which we can base the different aspects of community engagement. While creating a taxonomy, elements of a group should be carefully separated into

Box 1 Search keywords in detail

Keywords for community engagement

"Community Engagement" [Keyword]; "Community advisory board*" [Keyword]; "Community consultation" [Keyword]; Community participation [medical subject heading (MeSH)]; Community-based participatory research [MeSH]; Community-based research [Keyword]; Community [Keyword]; Residence Characteristics [MeSH]; Engagement [Keyword]; "Participatory research" [Keyword]; Community-Institutional Relations [MeSH]; "Community counseling" [Keyword]; Community health planning [MeSH]; Community health services [MeSH]; "Community advocacy" [Keyword]; "Community health" [Keyword]; "Population-based plan*" [Keyword]; Community Health Planning [MeSH]; "Community action" [Keyword]; "Public Participation" [Keyword]; "Citizen participation" [Keyword]; "Citizen Engagement" [Keyword]

Keywords for immigrant

Immigrant* [Keyword]; emigrant* [Keyword]; emigrants and immigrants [MeSH]; "undocumented immigrant*" [Keyword]; "undocumented emigrant*" [Keyword]; undocumented immigrants [MeSH]; alien* [Keyword]; foreigner* [Keyword]; newcomer* [Keyword]; refugee* [Keyword]; refugees [MeSH]

Table 3 List of databases to be searched to identify literature for this synthesis

Published articles	Grey literature
Health sciences	Academic-focused search engines
MEDLINE (Ovid)	Google Scholar
Embase	Repositories/theses
PsycINFO	ProQuest (theses and dissertations)
EBM Reviews	OAIster (WorldCat)
HealthSTAR	Health sciences
PubMed	Health Sciences Online
PubMed Central	TRIP
CINAHL	Canadian Institutes of Health Research
MEDLINE (Ebsco)	Canadian Institute for Health Information
TRIP	Public Health Agency of Canada
Social sciences	Health Canada
Psychology and Behavioural sciences collection	National Institutes of Health
Social science data archive	WHO
SocIndex with full text	National Health Services
Sociological abstracts	Alberta Health Services Insite
Social work abstracts	Social sciences
Multidisciplinary	International Federation of Social Science Organisations
Web of Science	Federation of Data Organisations for Social Science
Education Research Complete	Consortium of Social Science Associations
ERIC	Organisation for Social Science Research in Eastern and Southern Africa
Urban Studies Abstracts	International Organisation of Social Sciences and Behavioural Research
Scopus	Families Canada
Canadian Research Index	Government of Canada: Immigration and Citizenship
LegalTrac	
Business Source Complete	
Political science	
International Political Science Abstracts	
PAIS Index	

TRIP, Turning Research into Practice.

subgroups so that all the items in the subgroups are tagged as belonging to one specific taxonomy category, mutually exclusive and unambiguous. For taxonomy to be applicable in the real world, it must also be uncomplicated and easy to understand and use. We do not intend to present our taxonomy as an absolute classification scheme but rather as a starting point to examine core components of the dimensions and categories of community engagement applications that could lead to a widely accepted taxonomy in this area. Nevertheless, our classification schema will retain the following four attributes common across any taxonomy development: it will be concise, inclusive, comprehensive and extendible.²⁵

There is no singularly appropriate way to conduct an analysis for developing a taxonomy. In the proposed study, a qualitative research coding approach will be considered to analyse the information from the literature.²⁶ We will create key domains through developing a rule of inclusion in the form of a statement about meaning and process of community engagement across the selected studies. NVivo qualitative data analysis software (NVivo V.12.1.0, QSR International Pty) will be used to manage data and facilitate the qualitative analysis. The following steps represent a systematic approach (figure 2) that will

allow us to detect emergent concepts with a focus on generating a taxonomy.

Gaining familiarity with the information

Immersing ourselves in the data to obtain an overall impression of how it relates to our topic of interest is an important first step in the analysis.^{27 28} Reviewing data before coding helps identify emergent themes without losing the connections between concepts and their context.²⁹ Two reviewers will independently read all of the included papers and make broad notes about community engagement-related points.

Open coding using initial line-by-line coding approach

Codes are tags or labels that are assigned to whole documents or segments of documents (ie, paragraphs, sentences, or words) to help catalogue key concepts while preserving the context in which those concepts occur.³⁰ It offers the reviewer an iterative process of organising and documenting the data and allows them to uncover and identify significant links within and between concepts and experiences described in the data.²⁹ For qualitative data, we will review the quotes and descriptions line by line in detail; as a concept becomes apparent, a code

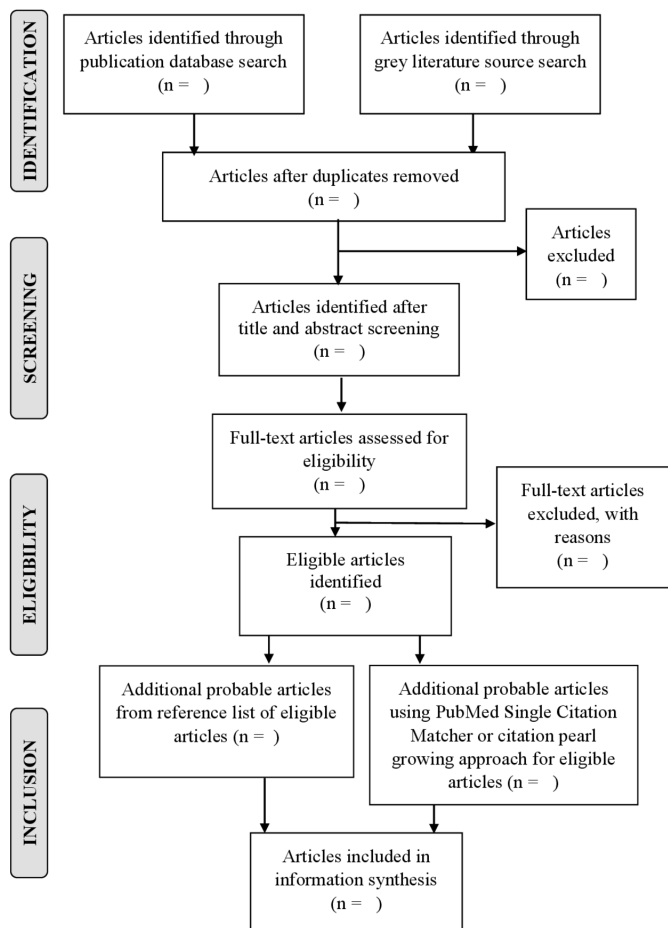


Figure 1 Flow diagram of the search and selection process for the systematic review.

will be assigned. For quantitative data, all study activities described will be coded. We will highlight the lines, paragraphs or segments that reflect the concepts as we

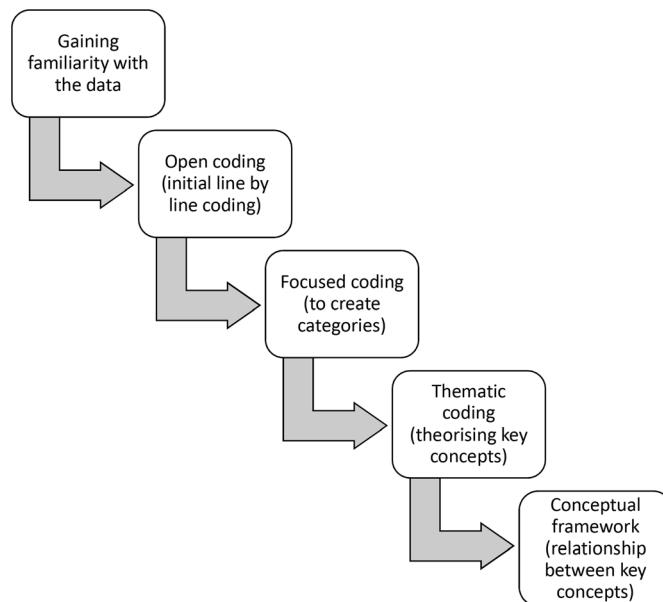


Figure 2 Schematic of coding workflow towards taxonomy development.

continue to code. Over time, code specifications will be developed and defined to represent the data.²⁹

Focused coding to create categories

In focused coding, searches are undertaken for the most frequent or significant codes. At this stage, we will categorise the coded data based on thematic or conceptual similarity.²⁶ Focused coding will provide us with the opportunity to search for and identify the most frequent or significant codes assigned during line-by-line coding to develop the most salient categories in the data corpus. It will also aid our decisions about which initial codes make the most analytical sense.

Table 4 Data extraction for developing taxonomy

Paper characteristics						
Title	Authors	Study place	Year of publication	Study design	Target population	Population/sample size
--	--	--	--	--	--	--
--	--	--	--	--	--	--
Community engagement definition						
Definition used in the study		Terminology used		Location		Rational provided
--		--		--		--
--		--		--		--
Model/ framework of community engagement						
Specific model/strategy used		Reference for the model/strategy		Outcome		Measurement of the outcome variables
--		--		--		--
--		--		--		--
Community engagement method						
Method used for community engagement		Analysis method		Strength		Limitation
--		--		--		--
--		--		--		--

Thematic coding for theorising key concepts

This step will identify the categories, common themes and ideas based on the previous two coding cycles. Conceptual codes will reveal key broad domains that characterise the process of community engagement. Conceptual subcodes will unveil common dimensions within those key domains. Within each dimension, there may be a further subdimension, depending on the complexity of the process and objectives. Key observations and insights from the data analysis will be laid out to conceptualise a working framework. The research team will meet regularly to review the codes and themes to ensure a good fit for the data.

Conceptual framework to explain the relationship between key concepts

Once coding categories emerge, we will link them together in theoretical models around a central unifying category. The research team will then organise the themes into an overall taxonomy of themes and subthemes.

Thematic analysis

At the final stage of the analysis, we will use thematic analysis^{31 32} approach to identify overarching issues and themes arising from manuscripts. This will allow us to capture and describe any unexpected patterns in our analysis that might be beyond the structure of the taxonomy development approach.

DISCUSSION

Anticipated outcomes

This review will summarise what is conceived of as *community engagement* in research focusing on immigrants and will attempt to adopt a widely acceptable unifying understanding of community engagement in its various forms. This review will allow us to describe the different approaches (ie, methods, strategies, frameworks/models and interventions) used to engage an immigrant population in research and identify which methods are best for the intended purpose. We will note the feasibility and appropriateness of approaches to initiating, implementing and managing community engagement interventions and the possible benefits for the engaged individuals and communities, as well as the significance of adopting a specific approach or implementing a specified objective with a particular immigrant population.

The taxonomy we develop will help researchers adopt, implement and evaluate multifaceted and complex community-engaged interventions with immigrants. The taxonomy will produce an inventory of appraisal tools relevant to immigrant communities around the world. The taxonomy will help distil multidimensional and multifarious community engagement research activities into those components most essential and paramount to comparing alternative approaches and helping promote the clear communication crucial for undertaking research with immigrant populations. Through this review, we will

be able to define different domains and dimensions of immigrant community engagement within the context of purpose, strategies used, depth and breadth of engagement, partners, outcomes and other aspects that may arise during taxonomy development. We will also define further subdimensions, as applicable, depending on the complexity of the individual inquiry.

Our review will also inform what research has been done to date and identify current gaps in the immigrant community-engaging research and is an important step towards developing a guideline for establishing community-engaged research for immigrants. We will deliver evidence-based recommendations for future programmatic research on immigrant community engagement. These recommendations will contribute towards community development, especially in marginalised immigrant communities, which may subsequently improve the quality of community health by assisting and encouraging immigrant community members to become more involved in managing their own health and wellness needs and in advocating for betterment of life by being active and meaningful partners in health and wellness initiatives in their community and in the larger society.

Strengths of the study

A key strength of this review protocol is the comprehensive search strategy and the use of a rigorous methodological framework to address the research question. This approach will allow us to maximise the potential for knowledge engagement and mobilisation at the community level. Also, a team of experienced researchers is undertaking the work. The team includes a librarian (MV) with experience conducting comprehensive systematic academic, grey and web searches, who assisted in crafting the search strategy, applying a data extraction template, and using a flexible approach to data acquisition and synthesis. The citizen researchers and community advocates involved were part of the working group from the brainstorming phase of this study and provided us the opportunity to codevelop this review.

Limitations of the study

Notwithstanding the strengths, there are a few challenges we need to keep in mind in accomplishing this protocol. First, given the complexity and breadth of definitions for community engagement and its framework, we need to give careful consideration to ensuring the best evidence is identified to answer the research question. Second, identifying pertinent literature will also be difficult, given that the concept of community engagement is relatively new. A flexible approach to the search terms and keywords used is necessary to ensure as many studies as possible are identified for review. Third, considering the lack of research focused on immigrant community engagement, it is assumed that synthesising and interpreting data will be a challenge. Nevertheless, this study is the first step in establishing a practical base for developing a strategic approach to community engagement with immigrants.



Ethics and dissemination

We intend to publish the results of the systematic review in academic and non-academic outlets to contribute knowledge about community engagement. This process will not require ethics approval.

Knowledge mobilisation/knowledge dissemination

We will engage end users in our research process, dissemination and implementation of findings following the core philosophy and mechanisms of integrated knowledge translation³³ or community-based participatory research.³⁴ We will disseminate the findings at the community level by creating appropriate infographics, pamphlets and posters with the guidance of our citizen researcher team members. We will also broadcast our findings in lay terms targeting community members through social media, ethnic language newspapers and ethnic online news outlets, and by having the knowledge translation materials available at social events. We will do this at every step of the project as a part of maintaining continuous engagement with the community. In doing so, we hope to enhance community-level participation in relevant next steps towards community engagement research. It is hoped that the review will facilitate future directions and potentially identify improved mechanisms for more targeted and impactful community-engaged research initiatives.

Patient and public involvement

To prepare the research idea and develop this proposal, we have partnered actively with citizen researchers at the community level from the very beginning. We had regular interactions with them to get their inputs in shaping our logic model (table 1) and guiding questions (table 2). They will be involved in the interpretation of the synthesised information and will be at the forefront of our knowledge mobilisation activities. They have agreed to guide us in creating infographics, leaflets, and other materials to be disseminated and advise us on which process to use for knowledge exchange and to allow us to take advantage of their connections with the extended community. Their involvement in this proposal provided a learning opportunity for them and allowed them to gain insight into the methodological aspects of knowledge synthesis.

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Contributors TCT is the guarantor and conceived the study idea. TCT, MV, MF and MZIC contributed to the development of the search and assessment strategies. TCT created the draft of the manuscript. TA, NC, MV, MF, NR, RU and MZIC contributed to further development of the manuscript. All authors read, provided feedback and approved the final manuscript.

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